

IN THE CLAIMS:

1. (CURRENTLY AMENDED) An inspection tool for determining the condition of a joint formed between a first and a second object, wherein the first object comprises a generator stator winding and the second object comprises a copper bar, the inspection tool comprising:

an arm disposed proximate a surface of the first object, wherein the surface overlies the joint;

a motion-imparting component for scanning the arm along the surface;

a sensor supported by the arm for inspecting the joint, wherein the joint is subdivided into a plurality of zones, and wherein an inspection signal is generated by the sensor for each of the plurality of zones; and

a processor responsive to the inspection signal from the plurality of zones for determining a condition of the joint.

2. (ORIGINAL) The inspection tool of claim 1 further comprising a securing component for removably attaching the tool proximate the joint.

3. (ORIGINAL) The inspection tool of claim 2 wherein the securing component further comprises a clamp for removably attaching the tool to one of the first or the second objects.

4.-6. (CANCELLED)

7. (ORIGINAL) The inspection tool of claim 1 wherein the plurality of zones comprises a plurality of substantially equally sized grid regions.

8.-10. (CANCELLED)

11. (ORIGINAL) The inspection tool of claim 1 wherein the joint formed between the first and the second objects is selected from between a brazed joint and a soldered joint.

12.-15. (CANCELLED)

16. (ORIGINAL) The inspection tool of claim 1 wherein the processor stores information relative to the inspection signal from the plurality of zones.

17. (ORIGINAL) The inspection tool of claim 1 wherein the inspection signal comprises an ultrasonic signal.

18. (ORIGINAL) The inspection tool of claim 1 further comprising a transducer supported by the arm for transmitting an incident signal toward the joint, and wherein the inspection signal comprises a reflection of the incident signal from the joint.

19. (CURRENTLY AMENDED) An ultrasonic inspection tool for determining the condition of a joint formed between a first and a second object, wherein the first object comprises a generator stator winding and the second object comprises a copper bar, the ultrasonic inspection tool comprising:

a securing component for removably attaching the tool proximate the joint;
an arm disposed proximate a surface of the first object, wherein the surface overlies the joint;

a motion-imparting component for scanning the arm along the surface;
an ultrasonic transducer/sensor supported by the arm for transmitting an ultrasonic signal toward the joint and for sensing an ultrasonic echo, wherein the joint is subdivided into a plurality of zones, and wherein the signal is transmitted within and the echo is received from one or more of the plurality of zones; and

a processor responsive to the echo from the plurality of zones for determining the condition of the joint.

20. (ORIGINAL) An inspection tool for a generator stator winding, wherein the winding comprises a top and a bottom coil interconnected by a copper bar forming a first joint between the top winding and the copper bar and a second joint between the bottom winding and the copper bar, the ultrasonic inspection tool comprising:

a securing component for removably attaching the tool to the top or the bottom winding;

an arm disposed proximate a surface of the copper bar, wherein the surface comprises a region of the copper bar substantially bounded by the underlying first or the second joint;

a motion-imparting component for scanning the arm along the surface;

an sensor supported by the arm, wherein an inspection signal is generated by the sensor for a plurality of joint zones; and

a processor responsive to the inspection signal for the plurality of joint zones for determining the condition of the first or the second joint.

21.-25. (CANCELLED)

26. (NEW) An inspection tool for determining the condition of a joint formed between a first and a second object, wherein the first object comprises a generator component and the second object comprises an electrically conductive interconnector, the inspection tool comprising:

an arm disposed proximate a surface of the first object, wherein the surface overlies the joint;

a motion-imparting component for scanning the arm along the surface;

a sensor supported by the arm for inspecting the joint, wherein the joint is subdivided into a plurality of zones, and wherein an inspection signal is generated by the sensor for each of the plurality of zones; and

a processor responsive to the inspection signal from the plurality of zones for determining a condition of the joint.

27. (NEW) An ultrasonic inspection tool for determining the condition of a joint formed between a first and a second object, wherein the first object comprises a generator component and the second object comprises an electrically conductive interconnector, the ultrasonic inspection tool comprising:

- a securing component for removably attaching the tool proximate the joint;
- an arm disposed proximate a surface of the first object, wherein the surface overlies the joint;
- a motion-imparting component for scanning the arm along the surface;
- an ultrasonic transducer/sensor supported by the arm for transmitting an ultrasonic signal toward the joint and for sensing an ultrasonic echo, wherein the joint is subdivided into a plurality of zones, and wherein the signal is transmitted within and the echo is received from one or more of the plurality of zones; and
- a processor responsive to the echo from the plurality of zones for determining the condition of the joint.